BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matters of	)	
Amendment of Part 11 of the Commission's Rules Regarding Emergency Alert System	)	PS Docket No. 15-94
Authorizing Permissive Use of the "Next Generation" Broadcast Television Standard	)	GN Docket No. 16-142

COMMENTS OF ONE MEDIA, LLC

Chairman Pai has admonished that "we have a collective responsibility to protect and serve those who protect and serve us….[E]stablishing a Blue Alert Code is just one example of our commitment to this principle."[1] ONE Media, LLC ("**ONE Media**") wholeheartedly supports this sentiment but posits that the Emergency Alert System ("**EAS**") and Wireless Emergency Alert ("**WEA**") technology underlying the NPRM is severely constrained and should yield to the dramatically more robust enhancements to the broadcast transmission standard embodied in ATSC 3.0 – "Next Gen TV."[2]

Although EAS has been an "effective method of alerting the public and saving lives and property,"[3] we note that it does so in an environment of extraordinarily limited capacity, constrained by a digital broadcast standard developed two decades ago. The means are now available to transform the emergency alerting system into one enormously enhanced by technology

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[1] *Amendment of Part 11 of the Commission's Rules Regarding Emergency Alert System,* Notice of Proposed Rulemaking, PS Docket No. 15-94, FCC 17-74 (rel. June 22, 2017) ("**NPRM**"), Statement of Chairman Ajit Pai.

[2] See *Authorizing Permissive Use of the "Next Generation" Broadcast Television Standard*, Notice of Proposed Rulemaking, GN Docket No. 16-142 (rel. Feb. 24, 2017).

[3] NPRM ¶ 8.

rooted in the Internet Protocol ("**IP**") and with modulation capacity to deliver service to mobile devices nationwide.

As the world's first IP-based terrestrial television transmission platform, Next Gen TV presents major new capabilities for emergency communications. Broadcasters will be able to leverage the native features of Next Gen TV/ATSC 3.0 – defined as "use cases" by the Advanced Television Systems Committee ("**ATSC**") which developed them – to achieve its major improvements in emergency communications.[4] For consumer devices that enable these features, examples include:

- ***Internet Integration***: Because ATSC 3.0 is designed to use the Internet Protocol, recipients of Next Gen TV alerts can use whichever "return path" is available to their receive device (principally broadband or LTE networks) to report information to authorities, such as in response to an AMBER alert when an abducted child is sighted. Importantly, the Next Gen TV alert can provide robust, highly reliable, congestion-free, rich media and instantaneous emergency messages to enabled devices, directly bypassing a congested Internet path and disabled or compromised cellular networks. In short: when the power goes out, consumers have two primary battery based systems – phones and vehicles. Next Gen TV was designed with both in mind. As a significant byproduct, Next Gen TV can also trigger "Internet of Things" devices such as "talking" fire/smoke alarms to alert building occupants of imminent dangers. In a smart phone-app based world, a Next Gen TV alert

[4] The 13 "use cases" representing the foundation of ATSC 3.0 are: Flexible Use of Spectrum; Robustness; Mobile; Ultra HD; Hybrid Services; Multi-view/Multi-screen; 3D Content (Video); Enhanced & Immersive Audio; Accessibility; Advanced Emergency Alerting; Personalization/Interactivity; Advanced Monetization; and Common World Standard.

can also trigger a relevant app, regardless of what service is running and immediately launch the emergency notification information.

- ***Geo-targeting***: Although all devices in a transmitter coverage area may physically receive the emergency alert message, the ability of alert originators to geocode messages, combined with devices being "aware" of their location (either through GPS or user setup), means that only alerts intended for a specific geographic area will be displayed on enabled devices in that area. Thus, Next Gen TV's geo-targeting can help solve the widely-recognized problem of over-alerting.
- ***Personalization/Interactivity***: Users will have the option to display alerts intended for another geographic area, such as a child's school when the parent is away at work. Except for Presidential alerts, which are broadly disseminated by law and regulation, personalization also will allow users to pre-determine the types of alerts or hazard levels that will trigger the display of an alert on their devices.
- ***Robustness and Mobile***: Because ATSC 3.0 signals can penetrate deep indoors, Next Gen TV enabled alerts will be able to reach a large percentage of the population on a range of devices. As broadcasters build out infrastructure to reach mobile devices, Next Gen TV alerts, using the one-to-many architecture of broadcasting, will be able to reach an unlimited number of handheld devices, connected automobiles, and other moving vehicles simultaneously.
- ***Wake-Up Functionality***: Importantly, advanced alerts also can leverage another powerful feature of ATSC 3.0 – signaling that permits receivers to alert people of an emergency even when the receiver is powered off. This "wake up" functionality allows enabled

receivers to process emergency alert information – an invaluable advance in the face of tornadoes, earthquakes and other sudden disasters, in addition to sudden man-made emergencies, such as bomb threats.

Advanced Emergency Alerting ("**AEA**") is included in multiple parts of the ATSC 3.0 suite of standards. Key components supporting Advanced Emergency Alerting are found within A/321 System Discovery and Signaling; A/324 Scheduler/Studio to Transmitter Link; A/331 Signaling, Delivery, Synchronization and Error Protection; A336 Content Recovery in Redistribution Scenarios; A/338 Companion Devices; A/342 Audio; and A/344 Application Runtime Environment. The AEA capability in ATSC 3.0 will support a broad range of urgent information — far beyond the scope and abilities of today's EAS — for emergency information to the public, as well as restricted messages to closed groups (which could include first responders). The AEA capability native to ATSC 3.0 supports a wide range of multimedia content, including cached or live media, multiple languages, and features useful for app developers on mobile, portable and fixed ATSC 3.0 receivers. The AEA was designed to handle the unique content and alert message formats in the United States, Canada, Mexico, Caribbean, Korea and other ATSC countries. For TV broadcasters, the next-generation ATSC 3.0 standard will allow station-driven emergency information to be integrated into a broad range of services, offering viewers the potential for individually-tailored alerts and emergency information over a portfolio of products (TV, web, mobile, *etc*.).

The EAS and WEA remain valuable alerting tools, but Next Gen TV dramatically exceeds their technological potential. The transmission of severe weather threats, child abductions and other local emergencies – including Blue Alerts involving law enforcement personnel – can be greatly improved with the rich media capabilities baked into the Next Gen TV standard. Rather

than a flat text crawl (no matter the recently increased number of characters)[5], Next Gen TV enhancements can include robust live Doppler radar images, evacuation routes and storm images – and in multiple languages. Similarly, in child abduction situations, photos of victims, suspected abductors, vehicles, license plates and maps can be available using the Next Gen TV features significantly improving the AMBER Alert functionality.

This spectacular evolution in alerting capabilities can also accommodate Blue Alerts. The Commission notes that delivery of alerts must be accurate, secure and geographically-targeted.[6] Next Gen TV's ability to target messages to discrete areas will far outperform the current EAS and WEA systems. Similarly, the Commission's concern with the current two-minute time limit on EAS alerts,[7] evaporates with Next Gen TV. Advanced alerting with Next Gen TV also allows certain content be encrypted for conditional access by first-responders only while allowing other alert information to be delivered to the public on an un-encrypted basis.

The Commission also favorably compares the content-rich Internet-provided Integrated Public Alert and Warning System ("**IPAWS**") against the over-the-air broadcast-based "daisy chain" distribution system. It asks whether Blue Alerts transmitted over EAS and WEA would be less valuable.[8] Of course, that obvious discrepancy is a function of the current EAS and WEA limitations. Who would not want an enabled data-rich alerting experience? Those limitations are resolved with Next Gen TV. The appropriate analogy is that Next Gen TV is to EAS/WEA what

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[5] The Commission has required carriers to increase the number of characters from the current 90 to 360 and to include embedded "clickable" URLs and phone numbers. *See Wireless Emergency Alerts*; *Amendments to Part 11 of the Commission's Rules Regarding the Emergency Alert System*, PS Docket Nos. 15-91 and 15-94, Report and Order and Further Notice of Proposed Rulemaking, FCC 16-127 (rel. Sept. 29, 2016) ¶ 11-29.

[6] NPRM ¶ 2 and ¶10.

[7] NPRM ¶ 9.

[8] Id.

the automobile was to the horse or in more current terms, what Internet search is to the paper bound encyclopedia. The essential point is that, whatever the benefits of Blue Alerts are as informed by the law enforcement community and others, it is beyond doubt that such alerts would be more detailed, more robust, more tailored and more beneficial if transmitted using Next Gen TV authorized capability as opposed to the more limited technology of EAS and WEA.

CONCLUSION

For the reasons explained, ONE Media urges the Commission to move expeditiously to approve voluntary use of ATSC 3.0 by broadcasters to facilitate Blue Alerts and all other alerting functionality.

Respectfully submitted,

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